Claims:

1. In a power converter, comprising:

an input for accepting a DC voltage;

a power transformer including a primary and secondary winding;

a power switch for periodically connecting the input to the primary winding;

an output for accepting a load to be energized;

clamping means for limiting a voltage across the secondary winding during a first interval of a cyclic period of the power converter;

a rectifier circuit connecting the secondary winding to the output; and including:

a synchronous rectification device with a control terminal connected to be responsive to a signal across the secondary winding such that the synchronous rectification device conducts a load current during the first interval; and

a diode connected for enabling conduction of the load current during a second interval other than the specified interval.

2. In a power converter, comprising

an input for accepting a DC voltage;

a power transformer including a primary and secondary winding;

a power switch for periodically connecting the input to the primary winding;

an output for accepting a load to be energized;

clamping means for limiting a voltage across the secondary winding during a first interval of a cyclic period of the power converter;

a rectifier circuit connecting the secondary winding to the output; and including:

a first synchronous rectification device with a control terminal connected to be responsive to a signal across the secondary winding such that the synchronous rectification device conducts a load current during the first interval, and

a second synchronous rectification device with a control terminal connected to be responsive to a signal across the secondary winding such that the second synchronous rectification device conducts the load current during a second interval other than the first interval.

3. In a power converter as claimed in claim 1 or 2, comprising:

the converter connected to operate as a forward type converter.

4. In a power converter as claimed in claim 1 or 2, comprising:
the converter connected to operate as a flyback type converter.

5. A switching mode power converter, comprising:
a power transformer including a magnetizing inductance requiring periodic recycling;
a first power stage for converting a DC input into a periodic pulsed voltage applied to a primary winding of the transformer, including:
a clamping circuit for limiting a voltage of the transformer during the periodic recycling;
a second power stage for rectifying an output of a secondary winding of the transformer and applying it to a load to be energized, including:
a synchronous rectifier including a first rectifying device with a control gate connected to be responsive to a signal across the secondary winding such that the synchronous rectification device conducts a load current during the periodic recycling when the clamping circuit is active, and
a second rectifying device connected for enabling conduction of the load current when the first rectifying device is nonconducting.

6. A switching mode power converter as claimed in claim 5, further comprising:
the second rectifying device comprises a diode.

7. A switching mode power converter as claimed in claim 5, further comprising:
the second rectifying device comprises a rectifying device with a control gate connected to be responsive to a signal of the secondary winding.

8. A switching mode power converter as claimed in claim 6 or 7, further comprising:
the secondary winding tapped and separated into first and second winding segments, and the first rectifying device is connected to the first winding segment and the second rectifying device is connected to the second winding segment.

9. A switching mode power converter as claimed in claim 6 or 7, further comprising:

the converter connected to operate as a forward type converter.

10. A switching mode power converter as claimed in claim 6 or 7, further comprising:

the converter connected to operate as a flyback type converter.